



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,196	04/04/2005	Bruno Bassi	5626	9591

7590 05/31/2006

Charles W Fallow
Shoemaker and Mattare
10 Post Office Road
Suite 100
Silver Spring, MD 20910

EXAMINER

LIN, KUANG Y

ART UNIT	PAPER NUMBER
----------	--------------

1725

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/530,196	BASSI, BRUNO	
	Examiner	Art Unit	
	Kuang Y. Lin	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The specification is objected to under 35 USC 112, 1st paragraph in that they appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For example, in page 1, line 14-15, it states that the fixed outside mold is called "chill". In page 1, line 5, it states it relates to gravity chills. Then, what is the gravity chills? In page 1, lines 19-20, it states that the main difficulty consists in perfectly collimating the inside of the part to be cast, that is the cores, with the outside. However, the part to be cast and the cores are not the same. In page 2, line 16, what "metal thickness" is referred to? In figure 8, reference numerals 16" and 17" indicate these elements as valve guide (see page 13, 1st paragraph of the specification). However, these elements are cores for forming holes or passages for valve guides. **These are the samples only. Applicant is required to correct these and other errors which might occur throughout the specification.**

2. The claims are rejected under 35 USC 112, 2nd paragraph in that they are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Further, claims 24, line 11, since there are unlimited number of materials in the molding art, it is not clear what kind of "other material" is referred to. Line 12, it refers to a combustion chamber. However, there is no combustion chamber formed prior to pouring of molten metal into the casting mold. In claim 25, the seat formed is for a core (16", 17") which is for forming a hole or a passage for the valve guide. Thus, the seat is not for a valve guide. Line 3, "at least" shall be changed to "said" to render the meaning definite. In claims 26 and 34, what

zone is referred to? In claim 29, what zone and shaped thickness are referred to? Further, claim 29, in line 9, there is a lack of antecedent basis in the claim for **"the main core box"**. In claim 33, it referred to **"the drawing"**. Thus, it is not clear what scope is claimed. In claim 34, **"the prints"** shall be changed to **"the core prints"** to render the meaning definite. In claim 35, there is a lack of antecedent basis in the claim for **"the sand and polymerized resin cores or of the inserts"**. In claims 36-38, what further step(s) is/are claimed? Those claims involve an apparatus claims depends from a method claim. However, those claims can be infringed without infringing the base claim from which it depends. Also, what **"moving parts"** are referred to? What is **"negative prints"**? In claim 41, last line, where **"at least one seat"** is formed? In claim 42, line 9, what is the **"valve seat guide"**? Further, there is a lack of antecedent basis in the claim for **"said at least one valve seat guide"**. In claims 42-44, respectively, the meaning of last two lines of the claim is not clear. Claim 43 claims an apparatus while process steps are recited. Thus, it is not clear what scope is claimed. Further, in line 10, there is a lack of antecedent in the claim for **"said at least one valve guide"**. Even if claim 43 is a method claim, in the embedding step, it is the core for forming a hole or passage for the valve guide, rather than valve guide is embedded. In claim 44, it is not clear what **"means for embedding"** is referred to.

3. Claim 39 insofar as definite is rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 55-98,632.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1725

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 24, 26-31, 33-36, 38, 40, 44 and 45 insofar as definite are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,691,754 to Trumbauer et al. and further in view of JP 63-281,761.

Trumbauser et al. substantially show the invention as claimed except that they do not place the valve seat into the molding die prior to assemble the core assembly therein. However, JP '761 shows that feature to be conventional (see figure 3). It would have been obvious to place the valve seat of Trumbauser et al. into the molding die, rather than to place round the core, in view of JP '761. With respect to claim 27, since it is conventional to injection forming of plastic material, it would have been obvious to injection forming the destructible layer of plastic material of ' 754 in view of the conventional practice. With respect to claims 28 etc., the core 30 appears to be a cooling jacket core (see, for example, US 4,093,018).

6. Claim 34 insofar as definite is rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,691,754 to Trumbauer et al. in view of JP 55-98,632 as applied to claim 24 above, and further in view of JP 55-98,632.

It would have been obvious to further provide the liner of JP '632 in the process of US '754 to improve the service life of the casting.

7. Claims 25, 32, 37 and 41-43 insofar as definite are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,691,754 to Trumbauer et al. in view of JP 55-98,632 as applied to claim 24 above and further in view of JP 63-281,760

It would have been obvious to provide the pin 58a, 58b of JP '760 in the process of US '754 for forming a passage for inserting the valve seat guides. As the pin 58a, 58b are provided in US '754, seats are formed in the plastic material.

8. Applicant's arguments filed May 22, 2006 have been fully considered but they are not persuasive.

a. Applicant's argument with respect to the sequence of placing the valve seat in the casting process as appearing in pages 8-9 of the remarks is moot in view of the newly cited prior art reference (JP '761) for the rejection.

b. With respect to the argument as appearing in page 9, last paragraph of the remarks, neither claim nor the specification set forth that feature.

c. In the process of JP '760, the valve guide is inserted after the casting step in that process. The reason for the addition machining and the insertion steps, instead of forming the valve guide as cast, is in that a valve guide of better wear resistance than that of as cast can be provided. If the valve guide with a high wear resistance property were not required, it would have been obvious to form the valve guide as cast.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kuang Y. Lin
Primary Examiner
Art Unit 1725

5-25-06